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February 15, 2011

Arizona Corporation Commission
DOCKETED
FEB 15 2011
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Docket Control
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

RE: Arizona Public Service Company Renewable Energy Standard Billing Offset Report
Decision No. 72022
Docket No. E-01345A-10- 0166 & E-01345A-10-0262

Pursuant to Decision No. 72022:

> IT IS FURTHER ORDERED that Arizona Public Service Company shall report to the Commission no later than February 15, 2011, on including RES surcharge offsets in customer bills as discussed in Finding of Fact No. 105.

Attached, please find Arizona Public Service Company's Renewable Energy Standard Billing Offset Report.

If you have any questions regarding this information, please contact Jeff Johnson at (602) 250-2661.

Sincerely,

Susan Casady

Susan Casady

SC/sl

cc: Brian Bozzo
Steve Olea
Terri Ford

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AZ CORP COMMISSION
DOCKET CONTROL

Arizona Public Service Company

Renewable Energy Standard Billing Offset Report

February 15, 2011

APS RENEWABLE ENERGY STANDARD BILLING OFFSET REPORT

Background

In Arizona Corporation Commission ("Commission") Decision No. 72022, the Commission required Arizona Public Service Company ("APS" or the "Company") to prepare and submit a report describing what information might be appropriate to provide to the customer that would reflect savings which "offset" the customer's monthly Renewable Energy Standard ("RES") surcharge:

> "We believe that APS customer bills should reflect the fuel (both in-state and out of state), transmission, reduced emissions and other savings which offset the REST surcharge. We request that APS submit a report to the Commission by February 15, 2011, on the following: (1) what costs would be included as REST surcharge offsets, (2) how it would calculate such savings, (3) and how this information would be represented on customer bills."[1]

In the discussion surrounding this requirement during Open Meeting,[2] it was clear that the focus of placing this information on the customer bill is primarily to: 1) educate the customer to the benefits of clean energy sources, and 2) identify how the customer contributes through the RES surcharge to provide funds to foster renewable resource development.

In this report, APS is proposing a method of calculating and demonstrating benefits of renewable energy that the Company believes will provide customers with information that will assist in the overall ongoing customer education process related to the development and acceptance of clean energy, and so the benefits of this energy can be easily understood.

Costs That Could Be Included In RES Offset Calculations

APS believes that it is appropriate to include calculations for both renewable resource programs and energy efficiency programs in customer communications, because the beneficial value of these two types of programs are similar. The inclusion of both resource types will provide the customer a reference point on the monthly bill, as customers do not see either the RES surcharge or the Demand Side Management Adjustment Charge ("DSMAC") as a separate line item on the bill. The

[1] Decision No. 72022 (December 10, 2010) Finding of Fact 105, page 25.
[2] November 22 and 23, 2010.

Environmental Benefits Surcharge billing line item includes both the RES surcharge and the DSMAC in accordance with Commission Decision No. 67744.[3]

APS additionally believes that it is appropriate to calculate offsets relating to renewable energy and energy efficiency programs based on a quantification of benefits that accrue to the general public by avoiding or reducing the production of energy from fossil fueled generating stations. A common approach utilized by utility industry participants to represent the estimated value of renewable energy and energy efficiency programs is to quantify a range of benefits that accrue to the general public because, through these programs, the utility may be able to avoid or reduce the production of energy from fossil fueled generating stations. These benefits may include a reduction in usage of natural gas as fuel, reduced emissions as a result of lower fossil fuel usage, and the ability to delay acquisition of fossil fueled generating resources.

Information provided to the customer using this "avoided" approach to explaining benefits can be highly effective, and presents the benefits of renewable resources and energy efficiency in a way so that all customers can easily relate those benefits to everyday living conditions. For example, a statement such as "The utility avoided producing over 800,000 tons of carbon dioxide emissions due to this program, which is equivalent to taking over 140,000 cars off the road" has an immediate impact on the customer, and one can readily visualize how a reduction in number of cars could benefit both individual customers and the general public.

Types of Costs

APS gathers and monitors emissions data throughout its generating fleet in order to fulfill reporting requirements from several regulatory agencies, including the Commission, the Environmental Protection Agency, and the Arizona Department of Environmental Quality. Additionally, the Company reviews its resource availability regularly and reports its expected energy needs for the future as part of the Commission's Resource Planning requirements, including expected impacts of renewable resources and energy efficiency on future generating requirements. Based on this information, APS believes the appropriate items to be included in a communications to customers regarding the benefits of renewable energy and energy efficiency include:

a) Avoided Generation and Transmission Capacity. An increased reliance on renewable resources and energy efficiency may allow APS to delay in-service dates or avoid acquisition of new infrastructure otherwise necessary to serve expected load requirements in the future. Avoided plant may include the generating resource itself as well as the various transmission structures (substations, interties, etc.) necessary to move the energy to the Company's load centers. Avoided capacity is measured in megawatts ("MW").

[3] Page 21, line 8 and Attachment A page 10, paragraph 50. (April 7, 2005).

b) Avoided Fossil Energy Production. As customers embrace renewable resources and energy efficiency, the Company will need less energy production than otherwise would be required from existing and future Company fossil fueled resources. Avoided energy is measured in megawatt hours ("MWh").

c) Avoided Natural Gas Consumption. Concurrent with a reduction in energy production as a result of an increased reliance on renewable energy and energy efficiency, the need to purchase natural gas as fuel is reduced. Energy displaced by energy efficiency and renewable generation is almost exclusively produced by resources fueled by natural gas. Benefits of avoided natural gas consumption include reducing the impact of potential future price volatility and availability. Avoided natural gas consumption is measured in thousands of cubic feet ("Mcf").

d) Avoided Gaseous Emissions Production. The fossil fuel combustion process results in releases of several gaseous emissions that are closely monitored as a result of current or expected regulatory standards:

- Carbon Dioxide (CO_2)
- Sulfur Dioxide (SO_2)
- Carbon Monoxide (CO)
- Nitrous Oxides (NOx)
- Mercury

A reduction in overall energy consumption through energy efficiency, or replacement of fossil fueled generation with renewable generation, will directly translate to a reduction in emissions. Avoided gaseous emissions are measured in tons with the exception of mercury, which is measured in pounds.

e) Avoided Particulate Emissions Production. A reduction in the level of fossil energy generation through adoption of energy efficiency and renewable resources will also directly translate to a reduction in particulate emissions. Particulate emissions are often referred to as "PM-10", for federal regulatory standards requiring monitoring and measurement of particulate matter 10 micrometers or less in diameter. Currently, APS employs various technologies to remove a portion of the particulate emissions at its coal plants. Avoided particulate emissions are measured in tons.

Calculation of Renewable Energy and Energy Efficiency Benefits

APS believes that providing a calculated cumulative dollar amount or a cents per kilowatt hour ("kWh") figure to represent the savings customers experience as a result of clean energy resources will not necessarily provide the customer with an accurate understanding of the beneficial impacts of renewable resources. Similarly, using complicated formulas in an attempt to quantify possible socioeconomic and environmental benefits of clean energy would be extremely difficult to communicate simply to customers, especially since there is controversy surrounding quantification methods of these benefits.

Calculating avoided emissions production and avoided energy consumption could be an extremely complicated exercise. However, the Company can employ several simplifying assumptions to provide the measurements discussed above for each type of benefit. Benefit information could be calculated annually, and would utilize the renewable energy and energy efficiency information provided in required annual compliance reports as a basis for the calculations.[4]

Overall, benefits could be calculated using prior year actual energy efficiency kWh savings and both kilowatt and kWh prior year generation from renewable resources. APS would assume that the energy that would have been provided to customers in the absence of these standards would have been generated by natural gas resources, as natural gas is on the margin most of the time, whether APS procures it from the energy market or produces it from its own generators. Additionally, the Company would assume that this natural gas generation would come from generators with the same operating characteristics as the APS Redhawk Generating Station (such as heat rate, emission rates, and water consumption rates).

To reflect individual customer benefits, the measurement calculation for each benefit identified would be divided by the total APS monthly sales to result in a kWh per measurement benefits. That number would be multiplied by the customer's consumption to derive individual customer contributions.

On-the-Bill Customer Communication Options

APS believes that the education component of any customer communication regarding renewable energy and energy efficiency is as important as the actual valuation calculations for each type of benefit listed. A communication could include an opening statement explaining the information contained on the page and why the information is of importance to the customer. Each of the benefits to be presented should be adequately defined, but the definitions should not be overly

[4] Compliance reports for the Renewable Energy Standard are due April 1st of every year in accordance with A.A.C. R14-2-1812. Year-end compliance reports for the Energy Efficiency Standard are due March 1st of each year in accordance with A.A.C. R14-2-2409(A).

technical in detail that would ultimately confuse the customer. The amount of avoided emission production or avoided consumption should be provided, using the appropriate quantity (tons, MWh, Mcf) and stating the measurement period clearly (monthly, quarterly, or annually as appropriate). A statement relating the benefit in such a way as to allow the customer to understand how the avoided production or consumption benefits the customer or the general public could also be included (as previously discussed). A brief and concise conclusion should complete the communication.

APS has calculated the cost of three separate options to communicate the benefits identified in this report on the customer bill.

1) Individualized Customer Calculations – Monthly Update.

This option provides the customer an individualized calculation of each of the listed benefits the general public would receive based on the customers' individual consumption each month. This method would require incremental costs associated with customer information and billing system programming, personnel, and costs associated with adding an additional page to the customers' bill and postage. Costs associated with this option range from $1,700,000 - $2,600,000 annually. The majority of the costs for this option are associated with adding an additional page to the bill and postage.

2) Overall Company Benefit Calculations – Monthly Update.

This option provides overall benefits measured for APS's generation fleet, as opposed to individual customer consumption, calculated either on a monthly basis on the bill or done as an insert on the bill at varying intervals. This method would require incremental costs associated with printing the bill or insert, personnel, and costs associated with adding an additional page to the customers' bill and postage or inserting a bill insert. Costs associated with this option range from $1,600,000 - $2,300,000 annually. As with option 1, the majority of the costs for this option are associated with adding an additional page to the bill and postage.

3) Bill Message Directing Customers to a Webpage – Annual Update.

This option would provide benefit information based on APS' generation fleet in the same manner as option 2, but would provide this information on aps.com, and a bill message would appear on the bill directing customers to the APS website. The numbers would be updated annually for the prior year. Costs associated with this option range from $7,000-$10,000 on an annual basis.

Conclusion

APS believes that it is appropriate to calculate benefits of renewable energy and energy efficiency programs based on a quantification of benefits that accrue to the general public by avoiding or reducing the production of energy from fossil fueled generating stations. APS believes this method will provide customers with information that could assist in the ongoing customer education process related to the development and acceptance of clean energy and showing benefits of clean energy that can be easily understood. The Company has identified several options in which this information could be relayed to customers. Depending on the complexity and frequency of the communications, costs may range from $7,000 to $2,500,000 annually. Should the Commission direct APS to implement an offset customer message, the Company will require cost recovery, in the appropriate forum, to implement any changes related to this program.